

# **BIOLOGICAL RESOURCES ANALYSIS**

**SERRANO HIGHLANDS**

**CITY OF LAKE FOREST, COUNTY OF ORANGE, CALIFORNIA**

Submitted to:

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**LSA**

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## EXECUTIVE SUMMARY

Inland Empire Builders has retained LSA Associates, Inc. (LSA) to prepare a Biological Resources Analysis for the “Serrano Highlands” property located at the northern terminus of Peachwood Street in the City of Lake Forest, Orange County, California (Figure 1). This analysis is intended to be a technical study for the Environmental Impact Report being prepared by others, and its scope is limited to biological issues.

The proposed use of the property is residential development and current adjacent uses include existing residential, agriculture, municipal water district, undeveloped open space, and an office campus. The project area is 23.79 acres. The proposed project includes the grading of 19.31 acres and fuel modification on an additional 4.48 acres. For the purposes of this analysis, a study area of 33.85 acres was surveyed.

LSA biologists conducted on-site assessments to survey and evaluate the existing habitat types within the proposed impact area, including the suitability of habitat for the presence of various sensitive species. The habitat was mapped according to the Orange County Habitat Classification System (HCS) consistent with the “Methods Used to Survey the Vegetation of Orange County Parks and Open Space Areas and The Irvine Company Property” (Jones & Stokes Associates, Inc., February 10, 1993). The results of the mapping are presented in Figure 1 and Table A.

Within the study area (33.85 acres) there are eight broad habitat classifications: sagebrush and sage scrub [2.3], mulefat scrub [7.3], sagebrush-grassland ecotone/sere [2.8.1], southern cactus scrub [2.4], irrigated agriculture [14.2], ruderal [4.6], developed [15], and disturbed [16]. The broad category sagebrush and sage scrub [2.3] is broken down into several subtypes which, within the project area, include: sagebrush-buckwheat scrub [2.3.1], sagebrush scrub [2.3.6], buckwheat scrub [2.3.7], sagebrush-black sage scrub [2.3.8], coyote brush scrub [2.3.9], mixed scrub/Mexican elderberry woodland [2.3.10/8.4], and sagebrush-coyote brush scrub [2.3.12].

The site is located within the jurisdiction of the Central/Coastal Orange County Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). Some portions of the property have utility easements in place; the easements are held by NCCP participating landowners. The balance of the land is owned by a nonparticipating landowner. The two sensitive species observed within the study area during the site visits, the coastal California gnatcatcher (*Polioptila californica californica*) and the coastal cactus wren (*Campylorhynchus brunneicapillus*), are covered by the NCCP/HCP. The one sensitive habitat type located within the project area is coastal sage scrub (CSS). It too is covered by the NCCP/HCP. Impacts to covered species and habitat types within the easements held by participating landowners have already been mitigated under the provisions of the NCCP/HCP. Outside of those easements, impacts to covered species can be mitigated through the NCCP/HCP in-lieu fee program.

## INTRODUCTION

Inland Empire Builders has retained LSA Associates, Inc. (LSA) to prepare a Biological Resources Evaluation for the Serrano Highlands property located at the northern terminus of Peachwood Street in the City of Lake Forest, Orange County, California (Figure 1). This analysis is intended to be a technical study for the Environmental Impact Report being prepared by others, and its scope is limited to biological issues.

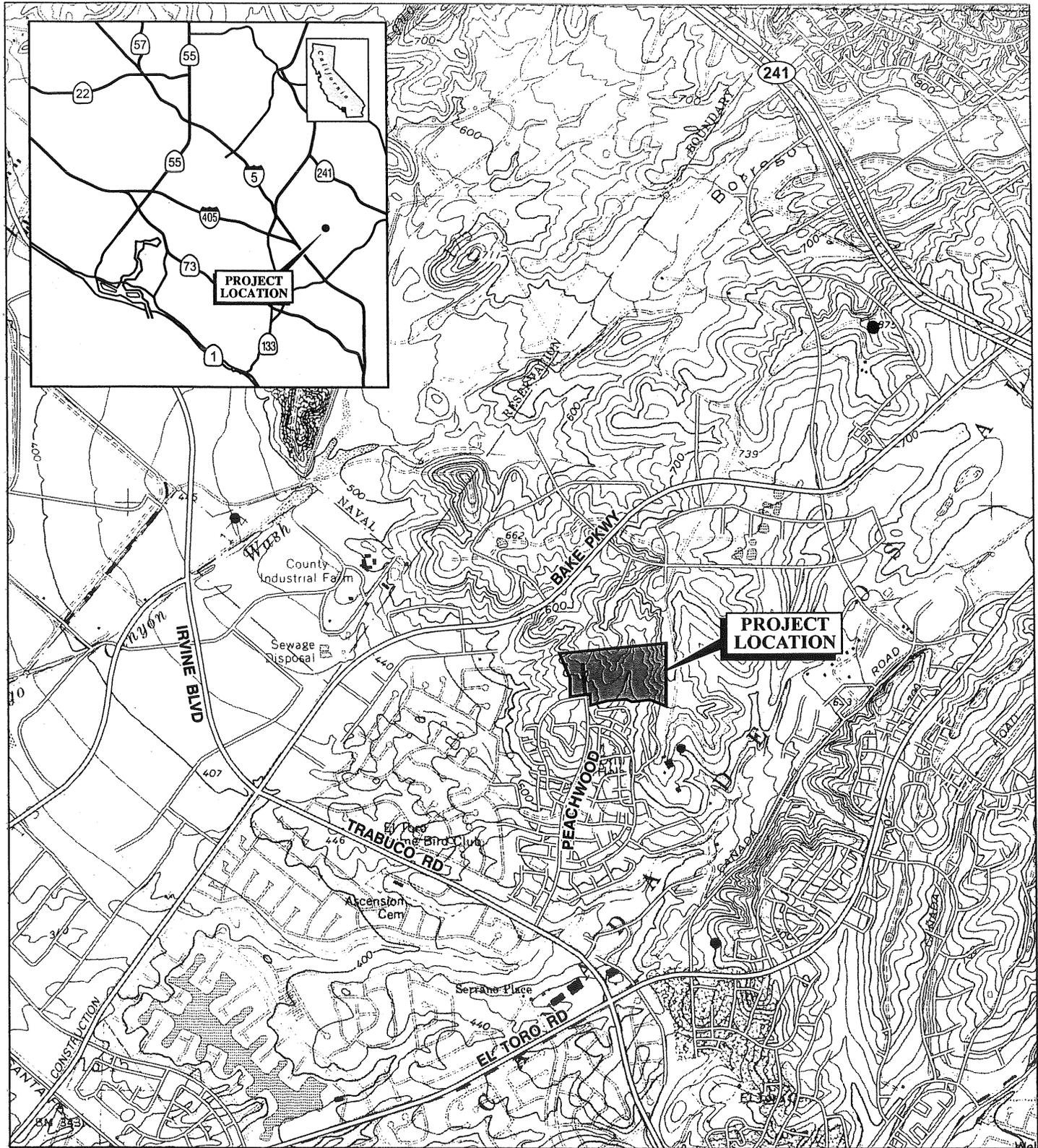
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**Table A: Habitat Acreages within Study Area**

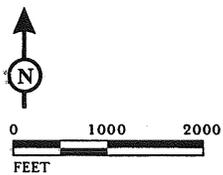
| Habitat Type and Classification Number               | Habitat within the Development Area | Habitat within the Study Area |
|--|-------------------------------------|-------------------------------|
| Sagebrush-Buckwheat Scrub – 2.3.1                    | 1.21                                | 1.60                          |
| Sagebrush Scrub – 2.3.6                              | 5.94                                | 6.96                          |
| Buckwheat Scrub – 2.3.7                              | 1.87                                | 2.16                          |
| Sagebrush-Black Sage Scrub – 2.3.8                   | 3.86                                | 5.68                          |
| Coyote Brush Scrub – 2.3.9                           | 0.07                                | 0.07                          |
| Sagebrush-Coyote Brush Scrub – 2.3.12                | 0.53                                | 0.53                          |
| Southern Cactus Scrub – 2.4                          | 0.82                                | 1.47                          |
| Sagebrush-Grassland Ecotone – 2.8.1                  | 0.43                                | 0.63                          |
| Mulefat Scrub – 7.3                                  | 0.46                                | 0.46                          |
| Mixed Scrub/Mexican Elderberry Woodland – 2.3.10/8.4 | 1.99                                | 3.86                          |
| Ruderal – 4.6  | 0.83                                | 0.98                          |
| Irrigated Agriculture – 14.2                         | 0.00                                | 0.31                          |
| Urban and Commercial – 15.1                          | 1.62                                | 1.82                          |
| Ornamental Landscaping – 15.5                        | 0.42                                | 2.54                          |
| Disturbed or Barren– 16.1                            | 3.73                                | 4.78                          |
| <b>Total</b>   | <b>23.79</b>                        | <b>33.85</b>                  |

Source: LSA 2005.



LSA

FIGURE 1



SOURCE: USGS 7.5' Quad - El Toro, Ca.

Serrano Highlands  
Project Location

## STUDY AREA LOCATION AND DESCRIPTION

The study area is located at the northern terminus of Peachwood Street in the City of Lake Forest, Orange County, California (Figure 1). It is located in the *El Toro* quadrangle of the United States Geological Survey 7.5-minute series topographical map. The property is within Section 11 of Township 6 South and Range 8 West. The site is located within the planning boundaries of the Central/Coastal Orange County NCCP/HCP.

## METHODS

The habitat in the study area was initially mapped by LSA biologist Chris Meloni. The entire study area was mapped on an aerial photograph (1 inch = 150 feet), and the respective habitat classifications were assigned. The product of the initial field mapping was then digitized and analyzed using a Geographic Information System (GIS) program to yield acreage of each habitat type. Computerized searches of sensitive species databases (California Native Plant Society Inventory of Rare and Endangered Plants of California and the California Department of Fish and Game Natural Diversity Database) were also undertaken.

A literature review and a records search were conducted to identify the existence or potential occurrence of sensitive or special-interest biological resources (e.g., plant and animal species) in the vicinity of or within the study area.

Federal and State lists of sensitive species were examined. Current electronic database records reviewed by LSA included the following:

- California Natural Diversity Data Base information (i.e., RareFind 3), which is administered by the California Department of Fish and Game (CDFG). This database covers sensitive animal and plant species, as well as sensitive natural communities that occur within California.
- California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (California Native Plant Society 2000a), which identifies four specific designations, or "Lists," of sensitive plant species and summarizes regulations that provide for the conservation of sensitive plants. The following quote is excerpted from the CNPS Inventory section that deals with the California Environmental Quality Act (CEQA) and sensitive plant conservation.

*The CDFG recognizes that Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that, in a majority of cases, would qualify for listing [pursuant to CEQA Guidelines Section 15380], and the Department recommends they be addressed in Environmental Impact Reports (EIRs).*

All sensitive species generated by the aforementioned research are listed in Table B.

Following the compilation of the aforementioned data, LSA biologists Blake Selna and Micaele Maddison surveyed the site to record individual species of plants and animals and to evaluate the habitat suitability for the sensitive species on the lists yielded by the database searches. The lists of plants and animals observed on site are included as Appendices A and B. The botanical survey and the bird survey were conducted on October 12, 2004. Many of the potentially present sensitive plants

**Table B: Summary of Sensitive Species**

| Species  | Habitat and Distribution  | Activity/Blooming Period | Status Designation <sup>1</sup>               | Probability of Occurrence <sup>2</sup>   |
|--|---|--------------------------|---|--|
| <b>SPECIES LISTED OR PROPOSED FOR LISTING</b>                                      |   |                          |   |  |
| VASCULAR PLANTS  |   |                          |   |  |
| <b>Thread-leaved brodiaea</b><br><i>Brodiaea filifolia</i>                         | Clay soils, usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats; Los Angeles, Orange, Riverside, and San Diego Counties.  | March–June               | Fed.: FT<br>State: CE<br>CNPS: 1B<br>NCCP: NC | <b>Low.</b> No apparent habitat on site; not observed during fall surveys; spring survey recommended when this species is detectable.                          |
| <b>Slender-horned spineflower</b><br><i>Dodecahema leptoceras</i>                  | Sandy and gravelly soils on alluvial fans and old floodplains; 500–2,000 foot elevation; Los Angeles, Riverside, and San Bernardino Counties. CNPS lists <i>El Toro</i> quad as part of range; no known occurrences on RareFind3.                     | April–June               | Fed.: FE<br>State: CE<br>CNPS: 1B<br>NCCP: NC | <b>Low.</b> Not observed during fall surveys; spring floristic survey recommended when this species is detectable; site has low level of hydrologic activity.  |
| CRUSTACEANS  |   |                          |   |  |
| <b>San Diego fairy shrimp</b><br><i>Branchinecta sandiegoensis</i>                 | Ponded areas such as vernal pools, cattle watering holes, basins, etc; found primarily in coastal San Diego County, but recently discovered in southern and central Orange County.  | Spring                   | Fed.: PE<br>State: —<br>NCCP: CC              | <b>Low.</b> No apparent habitat on site.   |
| <b>Riverside fairy shrimp</b><br><i>Streptocephalus woottoni</i>                   | Ponded areas such as vernal pools, cattle watering holes, basins, etc; primarily western Riverside, Orange, and San Diego Counties; also Baja California, Mexico.   | Spring                   | Fed.: FE<br>State: —<br>NCCP: CC              | <b>Low.</b> No apparent habitat on site.   |
| BIRDS  |   |                          |   |  |
| <b>Least Bell's vireo</b><br><i>Vireo bellii pusillus</i>                          | Riparian forests and willow thickets; breeds and nests only in southwestern California; winters in Baja California.   | April–September          | Fed.: FE<br>State: CE<br>NCCP: CC             | <b>Low.</b> No dense riparian woodland; large Mexican elderberry trees present.  |
| <b>Coastal California gnatcatcher</b><br><i>Polioptila californica californica</i> | Coastal sage scrub; occurs only in cismontane Southern California and northwestern Baja California in low-lying foothills and valleys.  | Year-round               | Fed.: FT<br>State: CSC<br>NCCP: C             | <b>Observed.</b>   |
| <b>SPECIES NOT LISTED, NOR PROPOSED FOR LISTING</b>                                |   |                          |   |  |
| VASCULAR PLANTS  |   |                          |   |  |
| <b>Catalina mariposa lily</b><br><i>Calochortus catalinae</i>                      | Heavy soil; on open grassy slopes and openings in brush; below 2,000-foot elevation in chaparral, coastal sage scrub, valley, and foothill grassland; San Diego County to San Luis Obispo County; Santa Catalina, Santa Cruz, and Santa Rosa Islands. | February–May             | Fed.: —<br>State: SP<br>CNPS: 4<br>NCCP: C    | <b>Moderate.</b> No remnants of this genus observed on site during fall surveys completed in 2004; suitable habitat occurs on site. Spring survey recommended. |

| Species   | Habitat and Distribution  | Activity/Blooming Period | Status Designation <sup>1</sup>              | Probability of Occurrence <sup>2</sup>   |
|---|---|--------------------------|--|--|
| <b>Intermediate mariposa lily</b><br><i>Calochortus weedii</i> var.<br><i>intermedius</i> | Dry, rocky, open slopes; often in chaparral, coastal sage scrub, valley and foothill grassland below 2,000-foot elevation; Los Angeles, Orange, and Riverside Counties.   | June–July                | Fed.: —<br>State: SP<br>CNPS: 1B<br>NCCP: CC | <b>Moderate.</b> No remnants of this genus observed on site during fall surveys completed in 2004; suitable habitat occurs on site; spring survey recommended.               |
| <b>Lewis' evening-primrose</b><br><i>Camissonia lewisii</i>                               | Sand or clay soils in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley foothill grassland.  | March–June               | Fed.: —<br>State: SP<br>CNPS: 3<br>NCCP: NC  | <b>Low.</b> Site not surveyed during appropriate time of year; typically found in immediate vicinity of the coast; spring survey will further ascertain presence or absence. |
| <b>Southern tarplant</b><br><i>Centromadia parryi</i> ssp.<br><i>australis</i>            | Coastal salt marsh margins, vernal mesic grasslands, vernal pools; often in ruderal, disturbed areas (e.g., drainage ditches, dirt road edges, tire ruts) below 1,400-foot elevation; coastal southern California from Santa Barbara County to Baja California; possibly Santa Catalina Island. | June–November            | Fed.: —<br>State: SP<br>CNPS: 1B<br>NCCP: NC | <b>Low.</b> Not observed during fall survey; potentially suitable habitat present on site; spring survey will further ascertain presence or absence.                         |
| <b>Tecate cypress</b><br><i>Cupressus forbesii</i>  | Closed-cone coniferous forest; chaparral.   | Evergreen                | Fed.: —<br>State: SP<br>CNPS: 1B<br>NCCP: C  | <b>Absent.</b> Evergreen; trees not observed on site during surveys.   |
| <b>Many-stemmed dudleya</b><br><i>Dudleya multicaulis</i>                                 | Often on clay soils and around granitic outcrops in chaparral, coastal sage scrub, and grasslands; below 2,500-foot elevation; Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties.  | May–July                 | Fed.: —<br>State: SP<br>CNPS: 1B<br>NCCP: NC | <b>Moderate.</b> No remnants observed during fall survey; spring survey recommended.   |
| <b>Vernal barley</b><br><i>Hordeum intercedens</i>  | Coastal dunes, coastal scrub, saline flats in valley/foothill grasslands, and vernal pools.   | March–June               | Fed.: —<br>State: SP<br>CNPS: 3<br>NCCP: NC  | <b>Low.</b> No habitat present on site; not observed during fall survey; spring survey recommended.  |
| <b>Mud nama</b><br><i>Nama stenocarpum</i>  | Marshes, swamps, lake shores, river banks, and intermittently wet areas between 5- to 500-meter elevation.  | January–July             | Fed.: —<br>State: SP<br>CNPS: 2<br>NCCP: NC  | <b>Low.</b> Dry, upland site; no suitable habitat on site.   |
| <b>Chaparral nolina</b><br><i>Nolina cismontana</i>                                       | Chaparral or coastal sage scrub.  | May–July                 | Fed.: —<br>State: SP<br>CNPS: 1B<br>NCCP: NC | <b>Absent.</b> Not observed on site during fall surveys; conspicuous habitat; would have been observed if present.   |

| Species   | Habitat and Distribution  | Activity/Blooming Period                          | Status Designation <sup>1</sup>   | Probability of Occurrence <sup>2</sup>             |
|---|---|---|-----------------------------------|--|
| CRUSTACEANS   |   |   |                                   |  |
| AMPHIBIANS  |   |   |                                   |  |
| <b>Western spadefoot</b><br><i>Spea hammondi</i>                            | Grasslands and occasionally hardwood woodlands; largely terrestrial, but for breeding, requires rain pools or other ponded water for three or more weeks; burrows in loose soils during dry season; Central Valley and foothills, coast ranges, inland valleys, to Baja California. | October–April (following onset of winter rains)   | Fed.: —<br>State: CSC<br>NCCP: C  | <b>Low.</b> Potential for rain pools.              |
| REPTILES  |   |   |                                   |  |
| <b>San Diego horned lizard</b><br><i>Phrynosoma coronatum blainvillii</i>   | Wide variety of habitats including coastal sage scrub, grassland, riparian woodland; typically on or near loose sandy soils; coastal and inland areas from Ventura County to Baja California.   | April–July (with reduced activity August–October) | Fed.: —<br>State: CSC<br>NCCP: C  | <b>Moderate.</b> Habitat on site appears suitable. |
| <b>Orange-throated whiptail</b><br><i>Aspidoscelis hyperythrus beldingi</i> | Floodplains and terraces with perennial plants and open areas nearby; sea level to 3,000-foot elevation; inland and coastal valleys of Riverside, Orange, and San Diego Counties to Baja California.  | March–July (with reduced activity August–October) | Fed.: —<br>State: CSC<br>NCCP: C  | <b>High.</b> Habitat on site appears suitable.     |
| <b>Coastal western whiptail</b><br><i>Aspidoscelis tigris multiscutatus</i> | Wide variety of habitats including coastal sage scrub, sparse grassland, and riparian woodland; coastal and inland valleys and foothills; Ventura County to Baja California.  | April–August                                      | Fed.: —<br>State: CSA<br>NCCP: C  | <b>Moderate.</b> Habitat on site appears suitable. |
| <b>California legless lizard</b><br><i>Anniella pulchra pulchra</i>         | Central California to northern Baja California; frequents loose soil and humus of relatively open habitats; susceptible to drying; lives only where it can reach damp soil.   | Nearly year-round                                 | Fed.: —<br>State: CSC<br>NCCP: NC | <b>Moderate.</b> Habitat on site may be suitable.  |
| <b>Coastal rosy boa</b><br><i>Charina trivirgata roseofusca</i>             | Inhabits rock outcrops and rocky shrublands from southwestern California to northern Baja California.   | Warmer months                                     | Fed.: —<br>State: CSA<br>NCCP: C  | <b>Low.</b> Habitat on site is marginal.           |
| <b>San Bernardino ringneck snake</b><br><i>Diadophis punctatus modestus</i> | Under surface objects along drainage courses; in mesic chaparral and oak and walnut woodland communities; moist habitats of southwestern California from Ventura to Orange Counties   | Year-round  | Fed.: —<br>State: CSA<br>NCCP: C  | <b>Moderate.</b> Habitat appears suitable.         |
| <b>Coast patch-nosed snake</b><br><i>Salvadora hexalepis virgulata</i>      | Coastal chaparral; washes, sandy flats, and rocky areas from San Luis Obispo County to northwestern Baja California.  | Active diurnally throughout most of the year      | Fed.: —<br>State: CSA<br>NCCP: NC | <b>Low.</b> Habitat may be suitable.               |
| <b>Northern red diamond rattlesnake</b><br><i>Crotalis ruber ruber</i>      | Desert scrub, thornscrub, open chaparral, and woodland; occasionally in grassland and cultivated areas; prefers rocky areas and dense vegetation; Orange and western Riverside Counties south to Baja California.   | Mid-spring to mid-fall                            | Fed.: —<br>State: CSC<br>NCCP: C  | <b>Moderate.</b> Habitat appears suitable.         |

| Species  | Habitat and Distribution  | Activity/Blooming Period | Status Designation <sup>1</sup>                | Probability of Occurrence <sup>2</sup>  |
|--|---|--------------------------|--|---|
| <b>BIRDS</b>   |   |                          |  |   |
| <b>White-tailed kite</b><br><i>Elanus leucurus</i>                 | Open country in South America and southern North America.   | Year-round               | Fed.: —<br>State: CSA,<br>CFP<br>NCCP: NC      | <b>Moderate.</b> Habitat is suitable for foraging and possible nesting.                                 |
| <b>Northern harrier</b><br><i>Circus cyaneus</i>                   | Open country in the Temperate Zone worldwide.   | Year-round               | Fed.: —<br>State: CSC<br>NCCP: C               | <b>Low.</b> Very little open grassy habitat.  |
| <b>Cooper's hawk</b><br><i>Accipiter cooperi</i>                   | Primarily forests and woodlands throughout North America.   | Year-round               | Fed.: —<br>State: CSC<br>NCCP: NC              | <b>Observed.</b>  |
| <b>Golden eagle</b><br><i>Aquila chrysaetos</i>                    | Generally open country in the Temperate Zone worldwide.   | Year-round               | Fed.: —<br>State: CFP<br>NCCP: C               | <b>Low.</b> Habitat suitable for foraging; the species is now very rare in Orange County.               |
| <b>Merlin</b><br><i>Falco columbarius</i>                          | Open country; breeds in the Holarctic and winters south to the Tropics.   | Fall–winter              | Fed.: —<br>State: CSC<br>NCCP: NC              | <b>Moderate.</b> Habitat is suitable.   |
| <b>Long-eared owl</b><br><i>Asio otus</i>                          | Scarce and local in forests and woodlands throughout much of the Northern Hemisphere.   | Nocturnal year-round     | Fed.: —<br>State: CSC<br>NCCP: NC              | <b>Low.</b> Very rare in Orange County; generally restricted to areas away from human disturbance.      |
| <b>Loggerhead shrike</b><br><i>Lanius ludovicianus</i>             | Open country in much of North America.  | Year-round               | Fed.: —<br>State: CSC<br>NCCP: NC              | <b>Low to Moderate.</b> Habitat is suitable; species is increasingly rare in Orange County.             |
| <b>Costa's hummingbird</b><br><i>Calypte costae</i>                | Primarily deserts, arid brushy foothills, and chaparral in the southwestern United States and northwestern Mexico.  | Spring–Fall              | Fed.: —<br>State: CSA<br>(nesting)<br>NCCP: NC | <b>Moderate.</b> Habitat is suitable.   |
| <b>Allen's hummingbird</b><br><i>Selasphorus sasin</i>             | Chaparral, woodlands, and residential areas; breeds in coastal areas from southern Oregon to San Diego County. Winters primarily in central Mexico but also north to southern California. | Year-round               | Fed.: —<br>State: CSA<br>(nesting)<br>NCCP: NC | <b>Moderate.</b> Habitat is suitable.   |
| <b>Nuttall's woodpecker</b><br><i>Picoides nuttallii</i>           | Oak, pine, and riparian woodland from northwestern Baja California to northern California.  | Year-round               | Fed.: —<br>State: CSA<br>(nesting)<br>NCCP: NC | <b>Observed.</b>  |
| <b>California horned lark</b><br><i>Eremophila alpestris actia</i> | Open grasslands and fields; agricultural areas from northern coastal California to northwestern Baja California.  | Year-round               | Fed.: —<br>State: CSC<br>NCCP: NC              | <b>Low.</b> May occasionally visit the open field area of the site that appears to be frequently mowed. |

| Species  | Habitat and Distribution   | Activity/Blooming Period | Status Designation <sup>1</sup>                  | Probability of Occurrence <sup>2</sup>  |
|--|--|--------------------------|--|---|
| <b>Coastal cactus wren</b><br><i>Campylorhynchus brunneicapillus</i>                     | The coastal population inhabits cactus scrub from southern Ventura County and southwestern San Bernardino County to northwestern Baja California.  | Year-round               | Fed.: —<br>State: CSC<br>NCCP: C                 | <b>Observed.</b>  |
| <b>California thrasher</b><br><i>Toxostoma redivivum</i>                                 | Primarily chaparral and riparian woodland from Northern California to northwestern Baja California.  | Year-round               | Fed.: —<br>State: CSA<br>NCCP: NC                | <b>High.</b> Habitat is suitable.   |
| <b>Yellow-breasted chat</b><br><i>Icteria virens</i>                                     | Nests in riparian situations across much of North America but extirpated from many areas; winters in Middle America.   | April– September         | Fed.: —<br>State: CSC<br>NCCP: NC                | <b>Low.</b> Habitat probably unsuitable.  |
| <b>Southern California rufous-crowned sparrow</b><br><i>Aimophila ruficeps canescens</i> | Steep, rocky coastal sage scrub and open chaparral habitats; particularly scrubby areas mixed with grasslands; from Santa Barbara County to northwestern Baja California.  | Year-round               | Fed.: —<br>State: CSC<br>NCCP: C                 | <b>Moderate.</b> Not observed.  |
| <b>Grasshopper sparrow</b><br><i>Ammodramus savannarum</i>                               | Grasslands of North America and northern South America.  | Spring and summer        | Fed.: —<br>State: —<br>NCCP: NC<br>Local Concern | <b>Low.</b> Habitat probably unsuitable.  |
| <b>MAMMALS</b>   |  |                          |  |   |
| <b>Pallid bat</b><br><i>Antrozous pallidus</i>   | Varied habitats in western North America.  | Year-round;<br>nocturnal | Fed.: —<br>State: CSC<br>NCCP: NC                | <b>Moderate.</b> Habitat appears suitable; fairly common in Orange County.                        |
| <b>California mastiff bat</b><br><i>Eumops perotis californicus</i>                      | Known historically from north-central California south to northern Baja California, eastward across the southwestern United States, and northwestern Mexico to west Texas and Coahuila; in California, most records are from rocky areas at low elevations, where roosting occurs primarily in crevices. | Nocturnal; warmer months | Fed.: —<br>State: CSC<br>NCCP: NC                | <b>Moderate.</b> Roosting habitat not present on site; this species travels widely when foraging. |
| <b>Yuma myotis</b><br><i>Myotis yummanensis</i>  | Varied habitats in western North America.  | Nocturnal; warmer months | Fed.: —<br>State: CSA<br>NCCP: NC                | <b>Moderate.</b> Habitat is suitable.   |
| <b>Small-footed myotis</b><br><i>Myotis ciliolabrum</i>                                  | Varied habitats in western North America.  | Warmer months            | Fed.: —<br>State: CSA<br>NCCP: NC                | <b>Low.</b> Habitat may be suitable; species rare in Orange County.                               |
| <b>San Diego Black-tailed jackrabbit</b><br><i>Lepus californicus bennettii</i>          | Open country of coastal Southern California and northern Baja California.  | Year-round               | Fed.: —<br>State: CSC<br>NCCP: NC                | <b>Low.</b> Habitat is marginal.  |

| Species  | Habitat and Distribution   | Activity/Blooming Period | Status Designation <sup>1</sup>  | Probability of Occurrence <sup>2</sup>     |
|--|--|--------------------------|----------------------------------|--|
| <b>Northwestern San Diego pocket mouse</b><br><i>Chaetodipus fallax fallax</i> | Open habitat on the Pacific slope from southwestern San Bernardino County to northwestern Baja California.   | Year-round               | Fed.: —<br>State: CSC<br>NCCP: C | <b>Moderate.</b> Habitat appears suitable. |
| <b>San Diego desert woodrat</b><br><i>Neotoma lepida intermedia</i>            | Frequents poorly vegetated arid lands and is especially associated with cactus patches; occurs along the Pacific slope from about San Luis Obispo to northwestern Baja California. | Year-round               | Fed.: —<br>State: CSC<br>NCCP: C | <b>High.</b> Habitat appears suitable      |

### LEGEND: STATUS DESIGNATION

#### FEDERAL STATUS

|     |  |
|-----|--|
| PE  | Federally proposed as Endangered.  |
| PT  | Federally proposed as Threatened.<br>Note: The U.S. Fish and Wildlife Service (USFWS) has recently revised its classification system for candidate taxa (species, subspecies, and other taxonomic designations), as described below.   |
| C   | Certain species formerly designated as "Category 1" (C1) and a few "Category 2" (C2) candidates for federal listing are now known as "Candidate;" refers to taxa for which the USFWS has sufficient information available to support a proposal to list as Endangered or Threatened. Issuance of the proposal(s) is anticipated, but precluded at this time. |
| **  | Species formerly designated as "Category 1" (C1) or* "Category 2" (C2) candidates for federal listing; not designated presently as "Candidate" species, these C1 and C2 designations have been discontinued by the USFWS. The State now refers to these taxa as "Species of Concern."  |
| C3a | Species considered to be extinct.  |
| C3b | Former federal candidate for listing as Endangered or Threatened, but which is not believed by the USFWS to represent a distinct taxa meeting the Endangered Species Act's definition of a "species"; species taxonomically invalid.   |
| C3c | Former federal candidate for listing as Endangered or Threatened, but which has been determined by the USFWS to be too widespread and/or not threatened at this time.  |

#### STATE STATUS

|     |  |
|-----|--|
| CE  | State listed as Endangered.  |
| CT  | State listed as Threatened.  |
| CR  | State listed as Rare.  |
| CFP | California Fully Protected; species legally protected under special legislation enacted prior to the California Endangered Species Act.          |
| CCE | State candidate for listing as Endangered.   |
| CCT | State candidate for listing as Threatened.   |
| CSC | California Species of Special Concern. These are taxa with seriously declining populations or otherwise highly vulnerable to human developments. |
| CSA | Species included on the California Department of Fish and Game's list of "Special Animals" of California; no specific designation assigned.      |

#### CALIFORNIA NATIVE PLANT SOCIETY LISTING

|    |   |
|----|---|
| 1A | List of plants that are presumed extinct in California.   |
| 1B | List of plants that are considered by the California Native Plant Society (CNPS) to be Rare, Threatened, or Endangered in California and elsewhere. |
| 2  | List of plants that are considered by CNPS to be Rare, Threatened, or Endangered, in California, but more common elsewhere.                         |
| 3  | CNPS review list of plants suggested for consideration as Endangered, but about which more information is needed.                                   |
| 4  | CNPS watch list of plants of limited distribution, whose status should be monitored.  |

#### NCCP

|    |  |
|----|--|
| C  | Species Covered by Central Coastal Subregion NCCP/HCP.               |
| CC | Species Conditionally Covered by Central Coastal Subregion NCCP/HCP. |
| NC | Species Not Covered by Central Coastal Subregion NCCP/HCP.           |

are not detectable except in the spring of most years. Habitat for some of the plant species included in the database search results is present on site. A survey is required in the spring to further ascertain the presence or absence of those species.

## RESULTS

### Current Site Conditions

The uses of the land surrounding the site include existing residential, agriculture, municipal water district, undeveloped open space, and an office campus.

Much of the site is dissected by trails/roads [disturbed or barren—16.1], which comprise 4.78 acres within the 33.85-acre study area. During the survey, the roads and trails showed evidence of use by automobiles, bicycles, and pedestrians. The project area also showed evidence of use as a paintball war field. Several well structures/pump stations and a terrace drain are present, and a chain-link fence surrounds much of the site.

### Plant Communities

Within the study area (33.85 acres) there are eight broad habitat classifications: sagebrush and sage scrub [2.3], mulefat scrub [7.3], sagebrush-grassland ecotone/sere [2.8.1], southern cactus scrub [2.4], irrigated agriculture [14.2], ruderal [4.6], developed [15], and disturbed [16].

The majority of this site is classified as sagebrush and sage scrub (or coastal sage scrub) habitat type. Coastal sage scrub (CSS) is broken down into several subtypes. Subtypes are determined by the dominant species of scrub component in a given area. Within the study area, the subtypes include: sagebrush-buckwheat scrub [2.3.1], sagebrush scrub [2.3.6], buckwheat scrub [2.3.7], sagebrush-black sage scrub [2.3.8], coyote brush scrub [2.3.9], mixed scrub/Mexican elderberry woodland [2.3.10/8.4], sagebrush-coyote brush scrub [2.3.12], and southern cactus scrub [2.4].

Of the 33.85 acres of study area, 22.33 acres are covered by CSS. The subtypes and their corresponding acreage are described below.

**Sagebrush-Buckwheat Scrub [2.3.1].** California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*) co-dominate this subtype. This habitat covers 1.60 acres within the study area. It occurs mostly in the southern-central and northeastern portions of the site.

**Sagebrush Scrub [2.3.6].** California sagebrush dominates this habitat type, creating “islands” of nearly monotypic vegetation. This habitat type covers 6.96 acres within the study area; it accounts for the largest acreage of any single subtype.

**Buckwheat Scrub [2.3.7].** This subtype is characterized by nearly monotypic stands of California buckwheat and usually contains little or no California sagebrush. This type accounts for 2.16 acres within the study area.

**Sagebrush-Black Sage Scrub [2.3.8].** California sagebrush and black sage (*Salvia mellifera*) dominate this habitat type. This habitat covers 5.68 acres of the study area (much of the eastern half of the site).

**Coyote Brush Scrub [2.3.9].** Coyote brush (*Baccharis pilularis* ssp. *consanguinea*) dominates this habitat type, which accounts for 0.07 acre within the study area.

**Mixed Scrub/Mexican Elderberry Woodland [2.3.10/8.4].** The mixed scrub habitat on site is composed of a mix of black sage, buckwheat, and California encelia (*Encelia californica*). It also contains, in moist or shaded areas, a great deal of Mexican elderberry (*Sambucus mexicana*). This type of habitat covers 3.86 acres of the study area.

**Sagebrush-Coyote Brush Scrub [2.3.12].** This habitat type is co-dominated by California sagebrush and coyote brush. This type occurs on 0.53 acre of the study area.

**Southern Cactus Scrub [2.4].** The composition of this habitat type is very similar to the CSS habitat types but differs in that it has a 20 percent or greater component of cacti. On this site, those cacti are coastal prickly pear (*Opuntia littoralis*) and coastal cholla (*Opuntia prolifera*). The shrub components may include representatives from the various CSS types. Southern cactus scrub covers 1.47 acres of the study area. Much of it is in the proposed fuel modification zone; cacti may be preserved in the nongraded areas of the fuel modification zones.

The following seven non-CSS habitat classifications occur within the study area:

**Sagebrush-Grassland Ecotone [2.8.1].** This habitat type is characterized by a 5–20 percent cover by California sagebrush, with the remainder of the cover created by subshrubs, forbs, and grasses. Within the study area, 0.63 acre is sagebrush-grassland ecotone.

**Mulefat Scrub [7.3].** Mulefat scrub is made up of dense stands of mulefat (*Baccharis salicifolia*) and typically contains a lesser component of willow species (*Salix* spp.). This habitat type is typically associated with seeps, intermittent streambeds, and ephemeral drainages. Within the study area, there is 0.46 acre of mulefat scrub primarily associated with the drainage course that parallels Peachwood Street.

**Ruderal [4.6].** The term *ruderal* refers to weedy and/or early successional species, often nonnative grasses, that readily colonize disturbed ground. Species include red brome (*Bromus madritiensis*), mustard (*Brassica nigra* and *Hirschfeldia incana*), Russian thistle (*Salsola tragus*), tocalote (*Centauria melitensis*), and wild oat (*Avena* spp.), among others. This type of habitat covers 0.98 acre within the study area, mostly occurring adjacent to the existing roads and trails.

**Irrigated Agriculture [14.2].** Irrigated row crops are grown on 0.31 acre within the study area.

**Urban and Commercial [15.1].** This classification applies to all buildings, pavements, and highway rights-of-way and accounts for 1.82 acres within the study area.

**Ornamental Landscaping [15.5].** Ornamental landscaping, consisting of introduced trees, shrubs, flowers, and turf grass, covers 2.54 acres within the study area.

**Disturbed [16.1].** The dirt roads and trails that crisscross the site are highly disturbed and contain little or no vegetation. Some of the roads are graded and compacted; others are very sandy. This classification applies to 4.78 acres within the study area.

## WILDLIFE

The study area is characterized by predominantly CSS habitat. Wildlife species occurring within the study area are characteristic of those found within this habitat type. All animal species observed or detected on site are listed in Appendix B.

Because the property is surrounded by existing development, any major functional wildlife corridors have been reduced or eliminated, and the usage of the property by large mammals has been negatively impacted. Evidence of desert cottontail (*Sylvilagus audubonii*) [scat and tracks], coyote (*Canis latrans*) [scat], and dusky-footed woodrat (*Neotoma fuscipes*) [nests] was observed on the property. Usage by avian species is extensive, both for nesting and foraging. A total of 20 bird species were observed on site; 19 are native to the area. Coastal California gnatcatchers (*Polioptila californica californica*) and cactus wren (*Campylorhynchus brunneicapillus*), which are indicative of CSS habitat, were observed during the site visits.

## WILDLIFE MOVEMENT AND HABITAT FRAGMENTATION

Large areas of habitat or narrower linkages of habitat between expanses of open space provide movement corridors for wildlife. The spatial relationship of food, water, and cover is generally of greatest importance, with movement patterns in temperate areas of California following a daily (rather than seasonal) cycle. Movement serves to facilitate the geographic distribution of genetic material, thus maintaining a level of variability in the gene pool of an animal population. Influxes of animals from nearby larger populations contribute to the genetic diversity of a local population, helping ensure the population's ability to adapt to changing environmental conditions. Movement

may occur in small groups, but most often is executed individually. Many plant species that depend on terrestrial insects for pollination also benefit from habitat linkages that allow for genetic exchange and dispersal. Reduced insect movement due to habitat fragmentation results in reduced genetic vigor in those plants.

## **SENSITIVE BIOLOGICAL RESOURCES**

### **Sensitive Species**

Legal protection of sensitive species varies widely, from the relatively comprehensive protection afforded to species listed as endangered and/or threatened to no legal status at present. The CDFG, U.S. Fish and Wildlife Service (USFWS), local agencies, and various special interest groups (e.g., California Native Plant Society [CNPS]) publish watchlists of declining species. These lists often describe the nature and perceived severity of the species' decline. In addition, recently published findings and preliminary results of ongoing research provide a basis for consideration of species that are candidates for State and/or federal listing. Finally, species that are clearly not rare or threatened either Statewide or regionally, but whose local populations are sparse, rapidly dwindling, or otherwise unstable, may be "of local interest."

For purposes of this discussion, the term "sensitive species" refers to those plants and animals occurring or potentially occurring on the property and designated as endangered or rare (as defined by CEQA and its Guidelines), or of current local, regional, or State concern. These are species that are rare, locally restricted, or declining in a significant portion of their range. Inclusion in the sensitive species analysis for this property is based on the following criteria: (1) direct observation of the species on the property during one of the biological surveys conducted for this report; (2) sighting by other qualified and reputable observers; (3) record reported by the California Natural Diversity Data Base (CNDDDB); or (4) property contains appropriate habitat and is within the known range of a given species. A variety of sources was used to establish the list of sensitive species potentially affected by the project. A foundation for the list of sensitive species within the study area is established by reviewing the CNDDDB and CNPS databases. However, these databases are constantly modified and are not considered a complete list of identified species within a particular area. Therefore, to augment these lists, LSA utilizes local experts with knowledge of the study area, reconnaissance surveys, and agency biologists to augment the information supplied by the databases.

Several sensitive plant and animal species identified in the initial literature search were subsequently excluded from further consideration because the property either lacks suitable conditions to support these species or the site is located well beyond their normal range.

For this section, sensitive species are broken down into those listed as endangered or threatened by the State and/or federal agencies and those not listed as such. Plant communities/habitats of concern are considered separately. Table B summarizes the status of those sensitive species known to occur or potentially occurring on the property.

### **Sensitive Wildlife Species**

**Listed Species.** On March 25, 1993, the coastal California gnatcatcher was listed as a "Threatened" species by the USFWS. Recently, the USFWS proposed the designation of critical habitat for this

species. This site is not a part of the designated critical habitat. This species occurs within coastal sage scrub habitat along the Southern California coast. The adults often remain together in pairs throughout the year on permanent territories (Kaufman 1996). A protocol survey was not conducted; however, during the site visits, gnatcatchers were observed. Gnatcatchers are covered by the NCCP.

The least Bell's vireo (*Vireo belli pusillus*) is listed as an "Endangered" species by the CDFG and the USFWS. This species breeds in the low, dense growth of streamside thickets. The likelihood of least Bell's vireo occurring on the site is low, although marginally suitable habitat occurs within the study boundaries.

**Nonlisted Species.** During the site visit, coastal cactus wrens (*Campylorhynchus brunneicapillus*) were detected on site. The cactus wren is classified as a California Species of Concern and is covered by the NCCP. The Nuttall's woodpecker (*Picoides nuttallii*) was also observed during the site visit and is classified as a California Special Animal.

The following additional sensitive animal species, which are discussed in more detail in Table B, have a moderate to high potential to regularly occur on site or as more than occasional migrants:

- San Diego horned lizard
- Orange-throated whiptail
- Coastal western whiptail
- California legless lizard
- San Bernardino ringneck snake
- Northern red diamond rattlesnake
- White-tailed kite
- Cooper's hawk
- Merlin
- Loggerhead shrike
- Costa's hummingbird
- Allen's hummingbird
- California thrasher
- Southern California rufous-crowned sparrow
- Pallid bat
- California mastiff bat
- Yuma myotis
- Northwestern San Diego pocket mouse
- San Diego desert woodrat

## Sensitive Plant Species

**Listed Species.** No federally listed, State listed, proposed endangered, or threatened plant species were observed on the site during the surveys. Listed plant species, or species proposed for listing that were identified in the literature review as potentially occurring on site or in the study area, were thread-leaved brodiaea (*Brodiaea filifolia*) and slender-horned spineflower (*Dodechema leptoceras*). The probability of either species occurring on the site is low. Thread-leaved brodiaea is not likely to occur on site because it is normally associated with the heavy clay soils typical of grasslands and vernal pools. Slender-horned spineflower is not expected to occur on site because it tends to occur in areas of heavy alluvial activity, such as desert washes and dry creek beds.

**Nonlisted Species.** The non-listed, sensitive, plant species that have a moderate to high probability of occurring on the site are: Catalina mariposa lily (*Calochortus catalinae*), intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), and many-stemmed dudleya (*Dudleya multicaulis*). They are discussed in further detail in Table B. Some species may not have been detectable during the surveys conducted during the fall. Spring surveys will be conducted to further ascertain the presence or absence of those species.

## Sensitive Habitats

Habitats are considered to be sensitive biological resources based on: (1) federal, State, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of sensitive plants or animals occurring on site. LSA biologists identified CSS as a habitat type considered sensitive by State and/or local agencies; it occurs on 22.48 acres within the study area. In addition, wetlands and waters of the United States are considered sensitive by both federal and State agencies. The drainage course that parallels Peachwood Street is considered to be “waters of the U.S.,” and the drainage and associated mulefat scrub may fall under the jurisdiction of the State of California.

## REGULATORY SETTING

### United States Army Corps of Engineers

The United States Army Corps of Engineers (Corps) jurisdiction pursuant to Section 404 of the federal Clean Water Act regulates discharges of dredged or fill material into waters of the United States. These waters include wetlands and nonwetland bodies of water that meet specific criteria as outlined in the guidelines provided in the Corps 1987 Manual and founded on a connection, or nexus, between the water body in question and interstate commerce. The following definition of waters of the United States is taken from the discussion provided at 33 CFR 328.3:

“The term waters of the United States means:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce . . . ;

(2) All interstate waters including interstate wetlands;

- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams) . . . the use, degradation or destruction of which could affect interstate or foreign commerce . . . ;
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition; and
- (5) Tributaries of waters defined in paragraphs (a) (1)–(4) of this section.”

The Corps and Environmental Protection Agency define wetlands as follows:

“Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions.”

In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied.

### **Regional Water Quality Control Board**

The Regional Water Quality Control Board (RWQCB) has regulatory authority over waters of the U.S. pursuant to Section 401 of the Clean Water Act and waters of the State pursuant to the Porter-Cologne Water Quality Control Act. The Corps cannot issue authorization for fill or discharge into waters of the U.S. without a Certification of Water Quality from the RWQCB. Additionally, isolated non-navigable waters and wetlands excluded from Corps jurisdiction are subject to RWQCB authority as waters of the State, and any discharge of waste (RWQCB considers fill to be waste) may require a Report of Waste Discharge and may be subject to Waste Discharge Requirements by the RWQCB.

The RWQCB can require mitigation measures above and beyond those required by the Corps or CDFG. However, typically the mitigation proposed to satisfy the Corps and CDFG meets RWQCB requirements to offset impacts to water quality.

### **United States Fish and Wildlife Service**

The Endangered Species Act (ESA) of 1973 sets forth a two-tiered classification scheme based on the biological health of a species. Endangered species are those in danger of becoming extinct throughout all or a significant portion of their range. Threatened species are those likely to become endangered in the foreseeable future; Special Rules under Section 4(d) can be made to address threatened species. Ultimately, the ESA attempts to bring populations of listed species to healthy levels so that they no longer need special protection.

Section 9 of the ESA prohibits the “take” of listed species by anyone unless authorized by the United States Fish and Wildlife Service (USFWS). Take is defined as “conduct which attempts or results in

the killing, harming, or harassing of a listed species.” Harm is defined as “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering.” Harass is defined as an “intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, including breeding, feeding, or sheltering.” Therefore, in order to comply with the ESA, any proposed project should be assessed prior to construction to determine whether the project will impact listed species or, in the case of a federal action on the project, designated critical habitats. If no federal action is associated with the proposed project, and the project will result in take of listed species, authorization from the USFWS in the form of a Section 10(a) take permit and an accompanying Habitat Conservation Plan (HCP) are required. If a federal action exists and the project may impact listed species, or designated critical habitat, then consultation with the USFWS is required. That consultation can result in an incidental take authorization through a biological opinion.

### **California Department of Fish and Game**

The CDFG, through Section 1602 of the California Fish and Game Code, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least an intermittent flow of water.

CDFG regulates wetland areas only to the extent that those wetlands are a part of a river, stream, or lake as defined by CDFG. While seasonal ponds are within the CDFG definition of wetlands, if they are not associated with a river, stream, or lake, they are not subject to jurisdiction of CDFG under Section 1602 of the Fish and Game Code.

The California Endangered Species Act (CESA; State Fish and Game Code Sections 2050–2098) was signed into law in 1984. It was intended to parallel the federal law. The State Endangered Species Act prohibits the unauthorized “take” of species listed as threatened or endangered under its provisions. However, a significant difference exists in the CESA definition of “take,” which is limited to actually or attempting to “hunt, pursue, capture, or kill.” CESA provisions for authorization of incidental take include consultation with a State agency, board, or commission that is also a State Lead Agency pursuant to CEQA; authorization of other entities through a 2081 permit; or adoption of a federal incidental take authorization pursuant to Section 2081.1. Similar to the federal act, actions in compliance with the measures specified as a result of the consultation process or 2081 permit are not prohibited.

### **Nesting Birds**

The federal Migratory Bird Treaty Act regulations and portions of the California Fish and Game Code prohibit the “take” of nearly all native bird species and their nests. While these laws and regulations were originally intended to control the intentional take of birds and/or their eggs and nests by collectors, falconers, etc., they can nevertheless be applied to unintentional take; e.g., destroying an active nest by cutting down a tree. It is sometimes possible to obtain a permit for relocating or removing a nest.

## **Natural Community Conservation Plan**

In an effort to respond to growing concern over the conservation of coastal sage scrub and other biological communities, federal, State, and local agencies have developed a multi-species approach to habitat conservation planning known as the NCCP process. This was made possible by legislation (Assembly Bill 2172) that authorized the Department of Fish and Game to enter into agreements for the preparation and implementation of Natural Communities Conservation Plans. The USFWS joined in this effort, utilizing both the Section 4(d) Special Rule and the HCP processes.

The goal of this NCCP program is to identify significantly important coastal sage scrub habitat and to develop ways and means to preserve and/or restore the ecological value of this and associated plant communities and their attendant sensitive species in a rapidly urbanizing setting. In Orange County, the development of two subregional NCCP/HCPs for coastal sage scrub and three other covered habitats was undertaken jointly by the County of Orange, the Transportation Corridor Agencies, USFWS, and CDFG, in cooperation with several large private landowners including The Irvine Company, with the County of Orange as the Lead Agency and other cities, including the City of Orange, as participating agencies. The NCCP/HCP for the Central/Coastal Subregion, which was approved by the participating agencies in July 1996, addresses a range of species issues and, in particular, subregional habitat needs of the coastal California gnatcatcher.

The site is located within the jurisdiction of the Central/Coastal Orange County NCCP/HCP, and a Section 10(a) permit has been issued for participating landowners and signatory agencies. Some portions of the property have utility easements in place; the easements are held by NCCP participating landowners. The balance of the land is owned by a nonparticipating landowner. For purposes of this discussion, the study area is split into two categories: (1) the easements held by participating landowners, and (2) the land covered by the NCCP but owned by nonparticipating landowners (see Figure 2). The major easement holders are Irvine Ranch Water District (IRWD) and Southern California Edison (SCE); both are participants in the NCCP. The balance of the property is subject to the NCCP in-lieu fee provision for mitigation. Within the easement areas, take of CSS, gnatcatchers, cactus wrens, and other species and habitats covered by the NCCP is already mitigated through the Participating Landowners' participation in the NCCP/HCP. Outside of the easement areas, take of covered species can be mitigated through the payment of in-lieu fees (\$50,000/acre) to the Nature Reserve of Orange County (NROC).

## **PROJECT-RELATED IMPACTS**

### **Significance Criteria**

Project effects upon biological resources may be significant if any of the following result:

- Substantial direct or indirect effect on any species identified as a candidate, sensitive, or special status species in local/regional plans, policies, or regulations, or by the CDFG or USFWS
- Substantial effect upon sensitive natural communities identified in local/regional plans, policies, or regulations or by agencies above

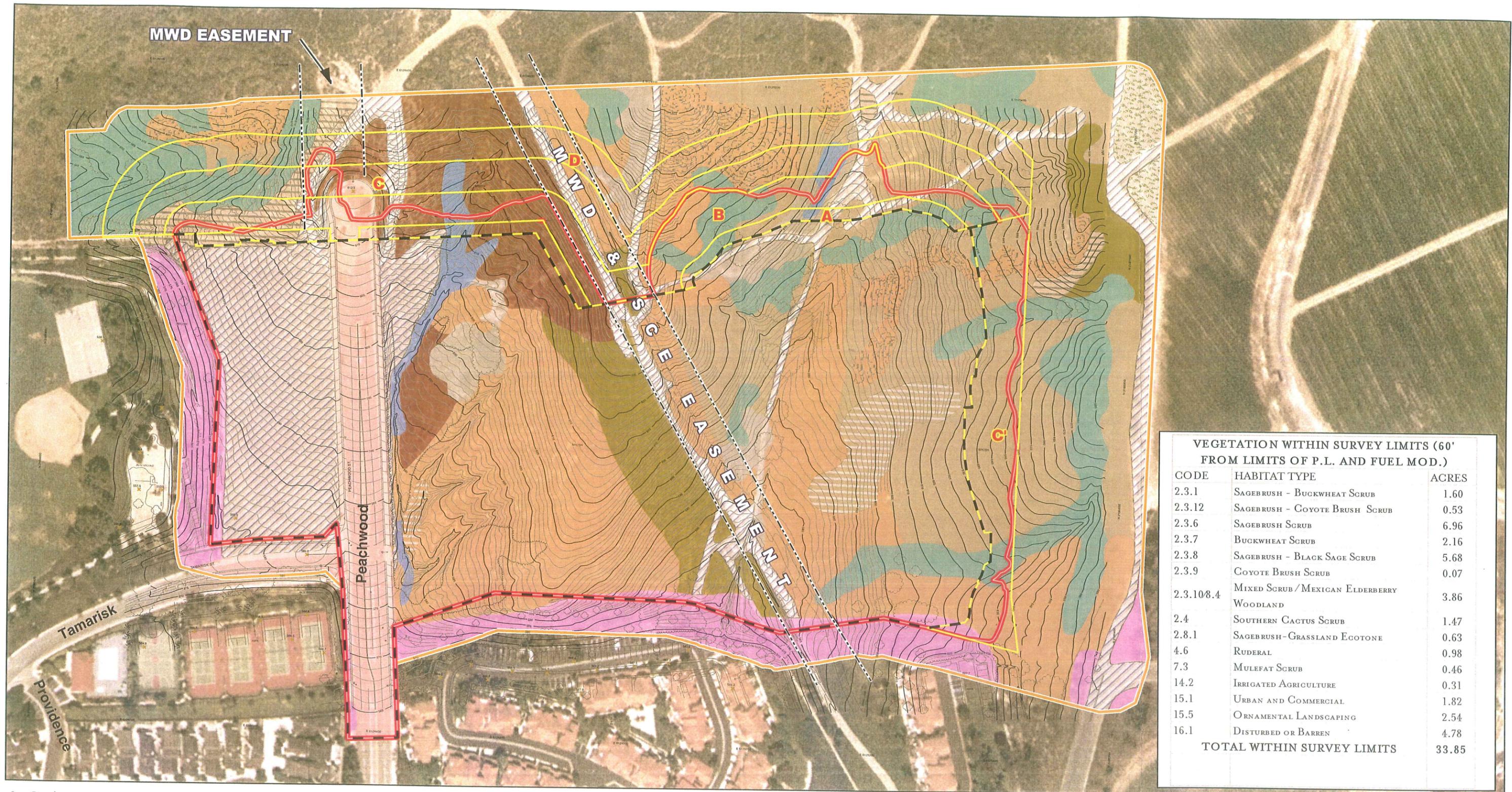


FIGURE 2

**LSA**

**Legend**

- Limits of Grading (Red dashed line)
- Survey Limits (Yellow dashed line)
- Easement (Black dashed line)
- Project Boundary (Black solid line)
- Fuel Modification Zone (Zone ID) (Yellow solid line)
- Vegetation:
  - 2.3.1 (Brown)
  - 2.3.6 (Orange)
  - 2.3.7 (Dark Brown)
  - 2.3.8 (Light Brown)
  - 2.3.9 (Yellow-Orange)
  - 2.3.12 (Light Yellow)
  - 2.4 (Light Green)
  - 2.8.1 (White)
  - 4.6 (Light Blue)
  - 7.3 (Blue)
  - 8.4/2.3.10 (Teal)
  - 14.2 (Light Green)
  - 15.1 (Pink)
  - 15.5 (Purple)
  - 16.1 (Hatched)

0 75 150 Feet

SOURCE: EagleAerial (2003) & LSA Associates (2004)  
i:\web430\gis\habitat\_map.mxd (06/07/05)

SERRANO HIGHLANDS  
Proposed Impacts to Existing Habitat

- Substantial effect (e.g., fill, removal, hydrologic interruption) upon federally protected wetlands under Section 404 of the Clean Water Act
- Substantial interference with movement of native resident or migratory wildlife species or with established native resident or migratory wildlife corridors or impeding the use of native wildlife nursery sites
- Conflict with any local policies/ordinances that protect biological resources (e.g., tree preservation policy or ordinance)
- Conflict with provisions of an adopted HCP, NCCP, or other approved habitat conservation plan

## GENERAL IMPACTS TO BIOLOGICAL RESOURCES

General impacts associated with the proposed project include the following:

- Direct loss of habitat as a result of vegetation removal and grading during construction. These impacts are considered permanent impacts and are further identified in Figure 2 and Table A. This is not significant where the existing habitat condition is disturbed, developed, or ruderal. However, where the habitat is native and sensitive, this impact would be considered significant.
- Introduction of exotic plant and animal species. Plants from residential landscaping may be introduced to adjacent open space. Animals, such as domestic cats, may hunt in natural areas or may become feral.
- Displacement of resident wildlife through the elimination/reduction of habitat.
- Translocation of edge effect into less disturbed habitat, thus reducing the quality of remaining open space.
- Increased competition for existing resident species that remain in a habitat area of reduced size.
- Introduction of more artificial light that may affect nighttime wildlife movement.
- Many of the bird species recorded during on-site surveys are expected to nest within and adjacent to the project boundary. Therefore, the potential exists for the project to impact nesting birds.

### Impacts to Sensitive Habitat Types

The overall development would impact 23.79 acres. Of that total, 16.20 acres are coastal sage scrub, a sensitive habitat type. Within the areas covered by utility easements, the impacts are covered under the NCCP/HCP. Impacts to CSS outside of the easements can be mitigated through the NCCP/HCP in-lieu fee program. Within the proposed project area, 1.65 acres of CSS are already covered by the NCCP/HCP, and 14.55 acres are candidates for the fee program. The fee of \$727,500 shall be paid to NROC prior to any impact to the CSS or other identified habitat or species.

### Impacts to Jurisdictional Waters

The ephemeral drainage that runs parallel to Peachwood Street is vegetated by primarily CSS species, but also contains and is flanked by some mulefat (*Baccharis salicifolia*). The proposed project will

impact approximately 375 linear feet of nonwetland waters potentially subject to Corps, CDFG, and RWQCB jurisdiction. Other areas may be jurisdictional but were not readily apparent during the initial site survey. The Corps asserts jurisdiction over the drainage as defined by the Ordinary High Water Mark (OHWM). The OHWM “. . . is defined in 33 CFR Part 328.3 as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of the terrestrial vegetation, or the presence of litter or debris.” In this case, the Corps jurisdiction will most accurately be defined by the scouring lines or shelving associated with “flashy” flows. The character of the drainage is that of a small wash with nearly vertical sides approximately eight feet across and six feet deep. The CDFG likely would assert jurisdiction over the drainage itself, as well as any adjacent associated riparian vegetation. In this situation, the adjacent mulefat scrub would probably be considered associated riparian vegetation.

The jurisdictional status of drainages similar to those described within this report is normally determined on a case-by-case basis by the regulatory agencies after completion of jurisdictional delineation. LSA recommends that after the jurisdictional delineation is completed, the agencies be consulted for a final determination regarding these drainages, as well as the boundaries of jurisdiction, and to finalize assessment of the potential impacts to jurisdictional areas.

### Impacts to Sensitive Species

**Wildlife.** The coastal California gnatcatcher, a federally threatened species and California Species of Concern, which is a covered species in the NCCP/HCP, was observed within the study area during on-site assessments. The coastal cactus wren was also observed during the site assessment visits and is a California Species of Concern, covered by the NCCP. Because the gnatcatcher and the cactus wren are covered by the NCCP/HCP, the impacts do not require further mitigation. Therefore, overall impacts to these sensitive species are considered less than significant as long as the project is consistent with the NCCP/HCP.

Although the federally listed as endangered least Bell’s vireo was not observed, there is a low potential for this species to occur within the suitable habitat on site during the breeding season. Typically, the least Bell’s vireo needs dense riparian thickets for breeding habitat; however, with the increasing local populations, vireos have been observed nesting in Mexican elderberry and other “nontypical” habitat. Although the proposed project will impact small acreages of potential habitat for this species, it is not anticipated to directly impact this federally and State-listed species if the mitigation measures outlined below are followed.

The scrub habitat within the proposed grading limits is potential habitat for the following species; therefore, a potential exists for the proposed project to impact these species during construction:

- San Diego horned lizard (NCCP covered, California Species of Concern)
- Orange-throated whiptail (NCCP covered, California Species of Concern)
- Coastal western whiptail (NCCP covered, California Special Animal)
- California legless lizard (California Species of Concern)

- San Bernardino ringneck snake (California Special Animal)
- Northern red diamond rattlesnake (NCCP covered, California Species of Concern)
- White-tailed kite (California Special Animal, California Fully Protected)
- Cooper's hawk (California Species of Concern)
- Merlin (California Species of Concern)
- Loggerhead shrike (California Species of Concern)
- Costa's hummingbird (California Special Animal [nesting])
- Allen's hummingbird (California Special Animal [nesting])
- Nuttall's woodpecker (*Picoides nuttallii*) (California Special Animal [nesting])
- California thrasher (*Toxostoma redivivum*) (California Special Animal)
- Southern California rufous-crowned sparrow (NCCP covered, California Species of Concern)
- Pallid bat (California Species of Concern)
- California mastiff bat (California Species of Concern)
- Yuma myotis (California Special Animal)
- Northwestern San Diego pocket mouse (NCCP covered, California Species of Concern)
- San Diego desert woodrat (NCCP covered, California Species of Concern)

Impacts to the above species are mitigated to insignificance through implementation of the mitigation measures described in the section below.

**Plants.** No sensitive plants are known to occur within the proposed project boundaries. Focused surveys shall be conducted during the appropriate season for the following:

- Many-stemmed dudleya (CNPS 1B)
- Intermediate mariposa lily (conditionally covered by NCCP, CNPS 1B)
- Catalina mariposa lily (NCCP covered, State Protected, CNPS 4)

If any of the plants listed above are observed during the spring surveys, impacts to those species shall be mitigated to insignificance through the implementation of the mitigation measures described in the section below. Other plant species that have a low probability of occurrence will also be surveyed during the spring surveys. Those plants are included in Table B.

### **Impacts to Wildlife Movement**

Impacts to wildlife movements as a result of this project are not considered to be significant because the site is surrounded on three sides by existing development. The northern side of the project site will remain open to the adjacent parcel of open space. The adjacent urban land uses are not significant sources of incoming animals. Development of the subject property will not further isolate resident

animals from other open space areas. It simply reduces the amount of open space that is already isolated.

### **Indirect Impacts**

Indirect impacts include construction-related impacts (such as impacts from dust, potential fuel spills from construction equipment, and activities of equipment or personnel outside the designated construction area) and operational impacts (such as effects on adjacent habitats caused by runoff, traffic, and litter). Construction of the proposed residential area will increase automobile and pedestrian traffic in the vicinity, as well as human presence and human use of the area. Consequently, the presence of trash and noise will increase around the edge of the neighborhood. These indirect impacts lower the value of adjacent habitat for wildlife and plants, thereby increasing the amount of habitat disturbed. This impact may be potentially significant.

## **PROJECT DESIGN FEATURES/MITIGATION MEASURES**

### **Measures to Address General Impacts to Biological Resources**

The direct loss of disturbed, developed, or ruderal habitats during construction is not considered a significant impact. However, where the habitat is sensitive or native, this impact would be considered significant. The impacts to CSS are mitigated through the NCCP program. One aspect of the mitigation provided through the NCCP is the construction minimization measures. These measures ensure that construction activities carried out by NCCP participants are consistent with good stewardship and do not involve unnecessary environmental impacts. The construction minimization measures and the additional measures stated below provide guidelines for the protection of adjacent habitat and for the minimization of impact to wildlife present on site at the commencement of construction. The Construction Minimization Measures are included in Table C.

In addition to the NCCP construction minimization measures, precautions must be taken to avoid impacts to raptors and other birds covered by the Migratory Bird Treaty Act. Tree and large shrub removals should be scheduled to occur outside the primary nesting season for raptors (January 1–July 31). That time period is inclusive of most other birds' nesting periods, thus maximizing avoidance of impacts to any nesting birds. If nesting birds are observed within the vicinity, a buffer from the nest shall be established. The size of the buffer is dependent upon the species and shall be determined by the qualified biologist. The buffer shall be delineated by roping the boundaries of construction and shall remain in place until the nest is abandoned or the young have fledged.

**Table C: NCCP Construction-Related Minimization Measures**

NCCP/HCP FEIS/FEIR No. 553, Section 7.5.3

|   |
|---|
| <p>1. To the maximum extent practicable, no grading of CSS habitat that is occupied by nesting gnatcatchers will occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these “construction-related minimization measures,” are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measures, and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will provide USFWS/CDFG with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of gnatcatchers, cactus wrens, and any other CSS Identified Species that are not otherwise flushed and will carry out the following measures only to the extent as practicable in the context of the public health and safety considerations.</p>   |
| <p>2. Prior to the commencement of grading operations or other activities involving significant soil disturbance, all areas of CSS habitat to be avoided under the provisions of the NCCP/HCP shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of CSS, a survey will be conducted to locate gnatcatchers and cactus wrens within 100 feet of the outer extent of projected soil disturbance activities, and the locations of any such species shall be clearly marked and identified on the construction/grading plans.</p>   |
| <p>3. A monitoring biologist, acceptable to USFWS/CDFG, will be on site during any clearing of CSS. The landowner or relevant public agency/utility will advise USFWS/CDFG at least seven (7) calendar days (and preferably fourteen [14] calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFG to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist will flush Identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they will be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System. It will be the responsibility of the monitoring biologist to assure that Identified bird species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.</p> |
| <p>4. Following the completion of initial grading/earth movement activities, all areas of CSS habitat to be avoided by construction equipment and personnel will be marked with temporary fencing or other appropriate markers clearly visible to construction personnel. No construction access, parking or storage of equipment or materials will be permitted within such marked areas.</p>  |
| <p>5. In areas bordering the NCCP Reserve System or Special Linkage/Special Management areas containing significant CSS identified in the NCCP/HCP for protection, vehicle transportation routes between cut-and-fill locations will be restricted to a minimum number during construction consistent with project construction requirements. Waste dirt or rubble will not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring biologist, construction supervisors, and equipment operators will be conducted and documented to ensure maximum practicable adherence to these measures.</p>  |
| <p>6. CSS identified in the NCCP/HCP for protection, and located within the likely dust drift radius of construction areas, shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.</p>   |

### **Measures to Address Impacts to Sensitive Habitat Types**

The grading footprint and fuel modification, shown on Figure 2, will impact 16.20 acres of CSS. The adjacent CSS to be preserved shall be protected from construction-related activities by the installation of construction fencing along the boundary. CSS impacted temporarily will need to be revegetated in accordance with the NCCP/HCP.

### **Mitigation Measures to Address Impacts to Jurisdictional Waters**

A delineation of jurisdictional waters shall be prepared and submitted to the Corps and the CDFG for confirmation, and the applicant will obtain the necessary 404/1602 authorization and RWQCB Section 401 Certification, as well as prepare a mitigation plan for any impacts to areas subject to Corps or CDFG jurisdiction.

To obtain the U.S. Army Corps of Engineers authorization and the Streambed Alteration Agreement, a detailed mitigation plan shall be prepared for any impacts to areas subject to jurisdiction. There are no predetermined ratios for habitat replacement. The nature and extent of habitat replacement is determined on a case-by-case basis. Generally, habitat replacement ratios may exceed 1:1 in order to compensate for the gradual nature of revegetation and off-site habitat replacement. This plan may include the restoration of riparian habitat outside of the proposed project site. The mitigation plan must be submitted to the agencies for their approval. After implementation of these mitigation measures, the impacts to any sensitive riparian habitat types within the project area will be mitigated to a less than significant level.

### **Mitigation Measures to Address Impacts to Sensitive Species**

Impacts to CSS habitat, coastal California gnatcatcher, and coastal cactus wren are mitigated to less than significant levels through the NCCP/HCP as long as this portion of the project is in conformance with the NCCP/HCP and Implementation Agreement (IA) policies and implementation measures.

**Wildlife.** Construction should be scheduled outside the breeding season (December 31–July 31). If construction must be completed during the breeding season, surveys for nesting birds must be conducted. Refer to the NCCP construction minimization measures for details.

**Plants.** Any sensitive (federally or State-listed and/or CNPS lists 1-2) plants not covered by the NCCP that are encountered during the spring floristic survey shall be mitigated through the implementation of a plan approved by the appropriate regulatory agency(ies). The potential species and their associated probabilities of occurrence are listed in Table B.

Dependent upon the size of the population of any intermediate mariposa lily or many-stemmed dudleya encountered during the spring surveys, a mitigation plan will be created to mitigate the impacts to a level of insignificance.

The many-stemmed dudleya is not expected to occur on site due to site-specific soil conditions. The probability of occurrence is still considered moderate because known populations exist within a few

miles of the site. A very small population (i.e., 200 or fewer individuals) may not be considered significant and would not require mitigation. A population in the several hundred to many thousands of individuals would be significant, and a mitigation program would need to be specifically tailored to the scope of the population.

The intermediate mariposa lily is conditionally covered by the NCCP and the mitigation of impacts specifically addressed in the NCCP IA. The mitigation requirements of this species are also dependent upon the size of the population in question. The NCCP IA states that “Planned Activities affecting populations smaller than 20 individuals are fully authorized. Planned Activities that affect populations of between 20 and 100 individuals (this number may be adjusted by USFWS and CDFG if reserve monitoring shows the size of potentially important populations to be different), shall be consistent with a mitigation plan that: (1) addresses design modifications or other on-site measures that are consistent with the project’s purposes, minimizes impacts to foothill mariposa lily habitat, and provides appropriate protections for any adjoining conserved foothill mariposa lily habitat, (2) provides for an evaluation of salvage, restoration/enhancement/management of other conserved mariposa lily, or other mitigation techniques to determine the most appropriate mitigation technique to offset impacts, and implements mitigation consistent with the foregoing evaluation, and (3) provides for monitoring and adaptive management of foothill mariposa lily consistent with Chapter 5 of the NCCP/HCP. The mitigation plan will be developed in coordination with USFWS, CDFG, and the NCCP Non-Profit Corporation, and approved by USFWS.” [NCCP IA, p. 96]

### **Mitigation Measures to Address Potential Indirect Impacts**

Indirect impacts can be mitigated to a less than significant level by establishing and maintaining environmental protection rules for project personnel, including the following:

- A dust control program shall be in place during construction so that native trees and shrubs on adjacent property are not damaged due to dust covering the leaves. A maximum speed limit of 15 miles per hour will be posted on all construction routes. Driving off designated project routes shall not be permitted.
- Pollution prevention practices shall be employed to prevent contamination of native habitats by construction-related materials. All project-related trash shall be collected and properly disposed of at the end of each workday.
- Best Management Practices (BMP) and a Storm Water Pollution Protection Plan (SWPPP) shall be employed to minimize erosion from the construction of project facilities and deposition of soil or sediment in off-site areas.
- All nonnative plants that are potentially invasive via airborne seeds, or that are particularly difficult to control once escaped, will be prohibited from all parts of the project. Prohibited plant species include but are not limited to the following:
  - Tree-of-heaven (*Ailanthus* sp.)
  - Giant reed (*Arundo donax*)
  - Garland chrysanthemum (*Chrysanthemum coronarium*)
  - Pampas grass (*Cortaderia* spp.)

- Brooms (*Cytisus* spp.)
- Bermuda buttercup (*Oxalis pes-caprae*)
- Fountain/Kikuyu grass (*Pennisetum* spp.)
- German ivy (*Senecio mikanooides*)
- Tamarisk (*Tamarix* spp.)

To ensure compliance with this measure, all fuel modification and revegetation/landscaping plans shall be reviewed, prior to plan approval, by a biologist with a working knowledge of local natural habitats and plant species.

With the implementation of these mitigation measures, these indirect impacts will be less than significant.

**APPENDIX A**

**PLANTS SPECIES OBSERVED**

## APPENDIX A

### VASCULAR PLANT SPECIES OBSERVED

LSA biologists Blake Selna and Micaele Maddison observed the following vascular plant species in the Study Area during site surveys conducted on October 12, 2004.

\* Introduced, nonnative species

#### GYMNOSPERMAE

##### Pinaceae

\* *Pinus* sp.

#### CONE-BEARING PLANTS

##### Pine Family

pine

#### ANGIOSPERMAE: DICOTYLEDONAE

##### Anacardiaceae

*Malosma laurina*

*Rhus integrifolia*

*Rhus ovata*

#### DICOT FLOWERING PLANTS

##### Sumac Family

laurel sumac

lemonade berry

sugar bush

##### Asteraceae

*Ambrosia acanthicarpa*

*Artemisia californica*

*Artemisia dracuncululus*

*Baccharis pilularis*

*Baccharis salicifolia*

\* *Centaurea melitensis*

*Corethrogyne filaginifolia* var. *filaginifolia*

*Encelia californica*

*Encelia farinosa*

*Gnaphalium bicolor*

*Heterotheca grandiflora*

*Isocoma menziesii* var. *vernonioides*

*Malacothrix saxatilis* var. *tenuifolia*

\* *Silybum marianum*

##### Sunflower Family

annual bur-sage

California sagebrush

tarragon

coyote bush

mulefat

totalote

cudweed aster

California encelia

brittlebush

bicolored cudweed

telegraph weed

coastal goldenbush

cliff malacothrix

milk thistle

##### Boraginaceae

*Cryptantha intermedia*

##### Borage Family

common cryptantha

##### Brassicaceae

\* *Brassica nigra*

##### Mustard Family

black mustard

|   |                           |
|---|---------------------------|
| * <i>Hirschfeldia incana</i>                    | shortpod mustard          |
| <b>Cactaceae</b>                                | <b>Cactus Family</b>      |
| <i>Opuntia littoralis</i>                       | coastal prickly pear      |
| <i>Opuntia prolifera</i>                        | coastal cholla            |
| <b>Caprifoliaceae</b>                           | <b>Honeysuckle Family</b> |
| * <i>Lonicera japonica</i>                      | Japanese honeysuckle      |
| <i>Lonicera subspicata</i> var. <i>denudata</i> | southern honeysuckle      |
| <i>Sambucus mexicana</i>                        | Mexican elderberry        |
| <b>Cucurbitaceae</b>                            | <b>Gourd Family</b>       |
| <i>Cucurbita foetidissima</i>                   | calabazilla               |
| <i>Marah macrocarpus</i>                        | wild cucumber             |
| <b>Cuscutaceae</b>                              | <b>Dodder Family</b>      |
| <i>Cuscuta californica</i>                      | California witch's hair   |
| <b>Euphorbiaceae</b>                            | <b>Spurge Family</b>      |
| <i>Chamaesyce albomarginata</i>                 | rattlesnake spurge        |
| <i>Croton californicus</i>                      | California croton         |
| <i>Croton setigerus</i>                         | doveweed                  |
| * <i>Ricinis communis</i>                       | castor bean               |
| <b>Fabaceae</b>                                 | <b>Legume Family</b>      |
| * <i>Jacaranda mimosifolia</i>                  | jacaranda                 |
| <i>Lotus scoparius</i> var. <i>scoparius</i>    | coastal deerweed          |
| * <i>Melilotus</i> sp.                          | sweetclover               |
| * <i>Robinia pseudoacacia</i>                   | black locust              |
| <b>Hydrophyllaceae</b>                          | <b>Waterleaf Family</b>   |
| <i>Phacelia ramosissima</i>                     | branching phacelia        |
| <b>Lamiaceae</b>                                | <b>Mint Family</b>        |
| * <i>Marrubium vulgare</i>                      | horehound                 |
| <i>Salvia apiana</i>                            | white sage                |
| <i>Salvia mellifera</i>                         | black sage                |
| <b>Myrtaceae</b>                                | <b>Myrtle Family</b>      |
| * <i>Eucalyptus</i> sp.                         | gum                       |
| <b>Oleaceae</b>                                 | <b>Olive Family</b>       |
| <i>Fraxinus velutina</i>                        | velvet ash                |
| <b>Polygonaceae</b>                             | <b>Buckwheat Family</b>   |
| <i>Eriogonum fasciculatum</i>                   | California buckwheat      |

**Rhamnaceae**

*Rhamnus californica* ssp. *californica*

**Salicaceae**

*Salix laevigata*

**Scrophulariaceae**

*Scrophularia californica*

\* *Nicotiana glauca*

**Tamaricaceae**

\* *Tamarix* sp.

**Buckthorn Family**

California coffeeberry

**Willow Family**

red willow

**Figwort Family**

California figwort

tree tobacco

**Tamarisk Family**

tamarisk

**ANGIOSPERMAE: MONOCOTYLEDONAE**

**MONOCOT FLOWERING PLANTS**

**Poaceae**

*Leymus condensatus*

**Grass Family**

giant wild-rye

Taxonomy and scientific nomenclature conform to Hickman (1993). Common names for each taxa generally conform to Roberts (1998) except where Abrams (1923, 1944, 1951) and Abrams and Ferris (1960) were used, particularly when specific common names for species were not identified in Roberts (1998).

**APPENDIX B**

**ANIMAL SPECIES OBSERVED**

## APPENDIX B

### ANIMAL SPECIES OBSERVED

LSA biologists noted the following conspicuous aerial insects, bony fishes, amphibians, reptiles, birds, and mammals noted in the Study Area. Presence may be noted if a species is seen or heard or identified by the presence of tracks, scat, or other signs.

\* Species not native to the Study Area

#### LEPIDOPTERA

##### **Lycaenidae**

*Brephidium exilie*

#### REPTILIA

##### **Phrynosomatidae**

*Sceloporus occidentalis*

##### **Scincidae**

*Eumeces skiltonianus*

#### AVES

##### **Odontophoridae**

*Callipepla californica*

##### **Cathartidae**

*Cathartes aura*

##### **Accipitridae**

*Accipiter striatus*

*Buteo jamaicensis*

##### **Columbidae**

*Zenaida macroura*

##### **Trochilidae**

*Calypte anna*

##### **Picidae**

*Picoides nuttallii*

#### BUTTERFLIES

##### **Gossamer-wing Butterflies**

Western pygmy-blue

#### REPTILES

##### **Phrynosomatid Lizards**

Western fence lizard

##### **Skinks**

Western skink

#### BIRDS

##### **New World Quail**

California quail

##### **New World Vultures**

Turkey vulture

##### **Hawks, Kites, Eagles, and Allies**

Sharp-shinned hawk

Red-tailed hawk

##### **Pigeons and Doves**

Mourning dove

##### **Hummingbirds**

Anna's hummingbird

##### **Woodpeckers and Allies**

Nuttall's woodpecker

---

**Tyrannidae**

*Sayornis nigricans*

**Corvidae**

*Aphelocoma californica*

*Corvus brachyrhynchos*

*Corvus corax*

**Troglodytidae**

*Campylorhynchus brunneicapillus*

*Troglodytes aedon*

**Sylviidae**

*Polioptila californica californica*

**Mimidae**

*Mimus polyglottos*

**Emberizidae**

*Pipilo crissalis*

*Melospiza melodia*

*Zonotrichia leucophrys*

**Fringillidae**

*Carpodacus mexicanus*

*Carduelis psaltria*

**Passeridae**

\* *Passer domesticus*

**MAMMALIA****Leporidae**

*Sylvilagus audubonii*

**Muridae**

*Neotoma fuscipes*

**Canidae**

\* *Canis familiaris*

*Canis latrans*

**Tyrant Flycatchers**

Black phoebe

**Crows and Jays**

Western scrub-jay

American crow

Common raven

**Wrens**

Cactus wren

House wren

**Old World Warblers and Gnatcatchers**

Coastal California gnatcatcher

**Mockingbirds and Thrashers**

Northern mockingbird

**Emberizids**

California towhee

Song sparrow

White-crowned sparrow

**Fringilline and Cardueline Finches and Allies**

House finch

Lesser goldfinch

**Old World Sparrows**

House sparrow

**MAMMALS****Rabbits and Hares**

Desert cottontail

**Mice, Rats, and Voles**

Dusky-footed woodrat

**Foxes, Wolves, and Allies**

Feral dog

Coyote

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**Taxonomy and nomenclature are based on the following:**

Damselflies and dragonflies: Manolis, T. (2003. *Dragonflies and Damselflies of California*. University of California Press, Berkeley.).

Butterflies: North American Butterfly Association (2001. *NABA Checklist & English Names of North American Butterflies, Second Edition*. North American Butterfly Association, Morristown, New Jersey.).

Fishes: Moyle, P.B. (2002. *Inland Fishes of California, Second Edition*. University of California Press, Berkeley.).

Amphibians and reptiles: Crother, B.I. et al. (2000. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding*. *Herpetological Circular* 29; and 2003 update.) for species taxonomy and nomenclature; Stebbins, R.C. (2003. *A Field Guide to Western Reptiles and Amphibians, Third Edition*, Houghton Mifflin, Boston.) for sequence and higher order taxonomy.

Birds: American Ornithologists' Union (1998. *The A. O. U. Checklist of North American Birds*, seventh edition. American Ornithologists' Union, Washington D. C.; and 2000, 2002, 2003, and 2004 supplements.).

Mammals: Grenfell, W.E., Parisi, M.D. and McGriff, D. (2003. *Complete List of Amphibians, Reptiles, Birds and Mammals in California*. California Department of Fish and Game. [http://www.dfg.ca.gov/whdab/pdfs/species\\_list.pdf](http://www.dfg.ca.gov/whdab/pdfs/species_list.pdf)).